

Financing adaptation: the use of innovative tools at the urban level

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Who are we?

- **I4CE** : Institute for Climate Economics
- **Our vision** : Harnessing economics for the climate
- **Missions:**
 - an initiative of **Caisse des Dépôts and Agence Française de Développement**. The *think tank* provides **independent expertise and analysis on** economic issues linked to climate & energy policies in France and throughout the world.
 - aims at helping public and private decision-makers to improve the way in which they **understand, anticipate, and encourage the use of economic and financial resources** to promote the transition to a **low-carbon resilient economy**.
- **3 programs:**
 - **Industry, Energy and Climate**: understanding policies for the low-carbon transition in the industry and energy sectors
 - **Finance, Investment and Climate**: analyzing the mainstreaming of climate change into financial decision-making by public and private entities.
 - **Territories and Climate**: identifying and analyzing courses of action in the fight against climate change in the agriculture and forestry sectors as well as urban areas.

Main issues for adaptation to climate change impacts at a local level

- Adaptation strongly depends on the context (geographical, economical, etc.) and requires data on possible climate change impacts

■ Schematic map of potential impacts of climate change in France by 2100



Source: CDC Climat Research, 2015, based on IPCC (2014), MEDDE (2014 et 2015), ONERC (2010) and Météo France.

Main issues for adaptation at the local level

- Adaptation = complex notion (linked with development, risk management, resilience, etc.), advantage to have a systemic vision, mainstreaming
- Overcoming multiple barriers (financial, legal, organizational, cognitive)
- Involvement of stakeholders
- Using economic analysis (multi-criteria analysis, etc.) as a useful decision-making tool
- Securing the funding for adaptation was perceived as a challenge by 85% of cities (Carmin et al. 2012)

Financing the adaptation gap

“The adaptation funding gap can be defined and measured as the difference between the costs of meeting a given adaptation target and the amount of finance available to do so.”

UNEP, 2014

Global Adaptation costs

- Climate change adaptation costs to around USD150 billion/year by 2025/2030 and US\$250 billion to US\$500 billion/year by 2050, according to a 2°C scenario, (UNEP 2014)
- 80% of the adaptation costs for 2010-2050 could be carried by urban areas (World Bank, 2010)

Global Adaptation financing

- Climate finance at USD 331 billion/year in 2013, of which USD 25 billion/year targeted adaptation (CPI, 2013)
- 20% of bilateral climate adaptation portfolios, equivalent to USD 0.65 to USD 1.6 billion bilateral ODA flows per year dedicated to urban adaptation (IPCC, 2013)
- 10% of climate funds target to urban areas between 2010-2014 (ODI)

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Need of shifting public funding, involving end-users, increasing leverage effect, involving private sector (financial mechanisms, norms, legislation, public planification, public procurement, etc.)



In developed countries

- **Several types of tools to finance costly measures:**
 1. To raise additional capita for initial investment
 2. To collect extra revenues over the project lifetime
 3. To use financial risk hedging tools

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- **Several types of tool to finance costly measures :**

1. To raise additional capita for initial investment

- PPP: to attract private investment and to benefit from private expertise => *adaptation criteria in the contract*

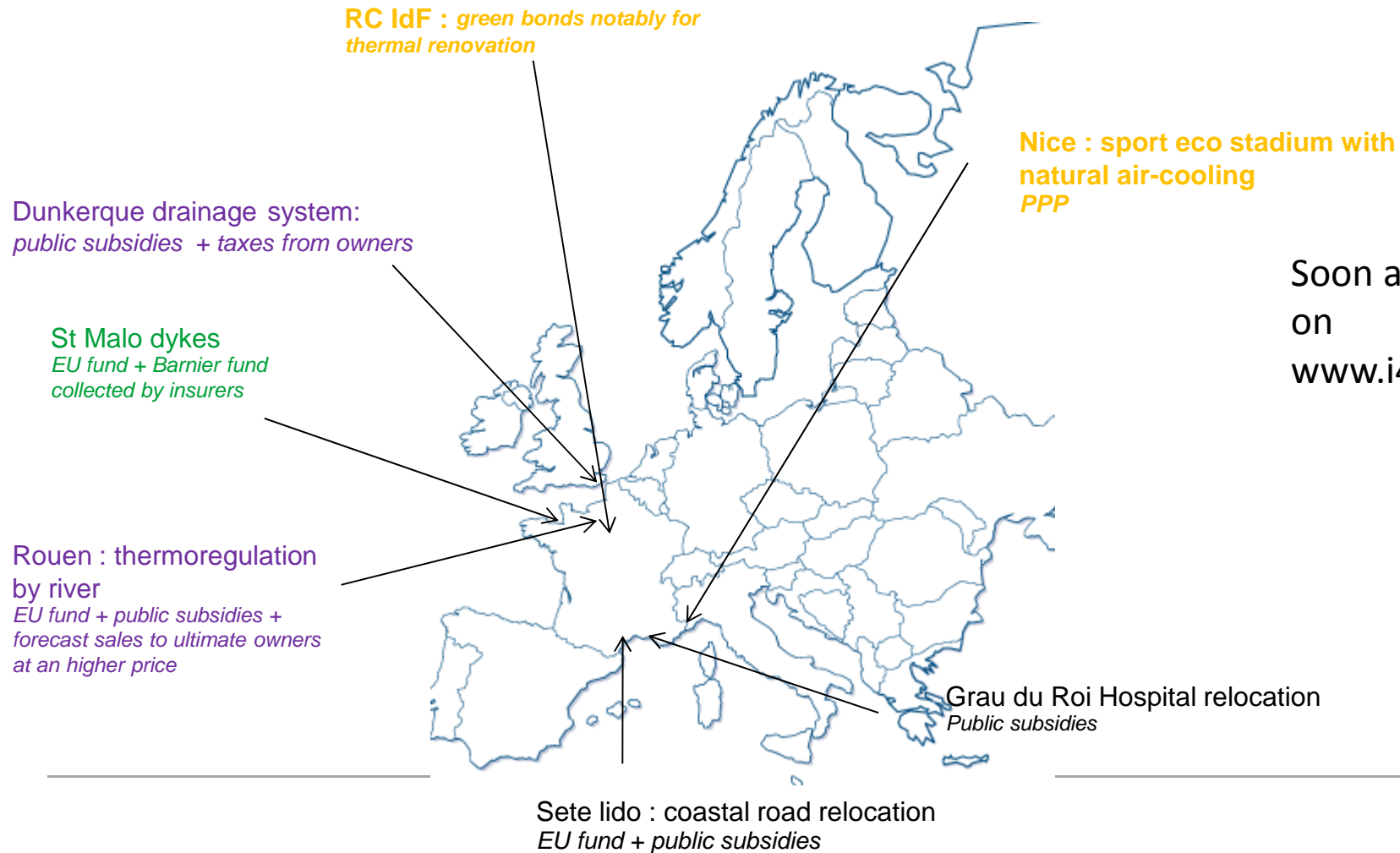
- Project bonds or green bonds: access to capital market, and to long-term investors or Socially Responsible Investors => *adaptation criteria in the assessment*

- Third-party investment: ex-ante funding, revenues through ex-post cost savings => *adaptation criteria, based on energy or water savings for instance*

In developed countries

- **Different types of tools to finance costly measures :**
 2. To collect extra revenues over the project lifetime
 - local tax, fee: *incentive for end-users to consider adaptation*
 - permit markets (ex.: on water)
 3. To use financial risk hedging tools: insurance, cat bonds, etc. *to cover climate risks and provide right incentive*

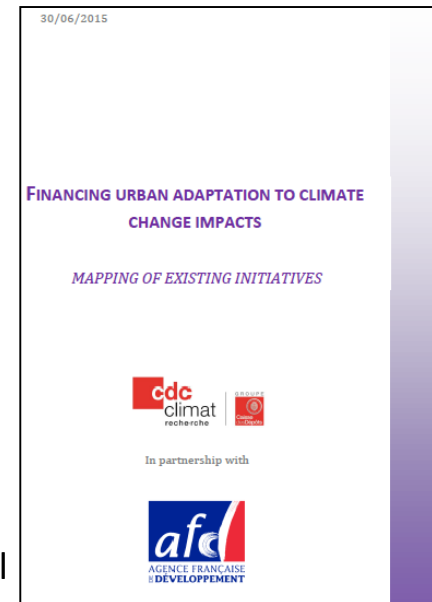
Examples in France



Soon available
on
www.i4ce.org

In developing countries

- **A mapping of 27 initiatives** available for the financing of urban adaptation to climate change offering additional options to more conventional sources of funding for climate change and sustainable development (national budget transfers, Official Development Aid, etc.)
- **Key elements:**
 - **Few initiatives** dedicated to adaptation; **more** on climate change and development issue, which can consider adaptation issue
 - Strong prevalence of initiatives supporting **soft adaptation measures** (strategy planning, capacity building, project design, technical assistance, etc.)
 - Providing grants, concessional loans
 - **Significant role of local intermediaries** (regional and local banks, national development funds, etc.)
 - **Several key factors of success** among which liaising with international development stakeholders (such as multilateral and bilateral donors) at the local level and the identification of various co-benefits and synergies between the economic, environmental and climate impacts.
 - See : <http://www.i4ce.org/wp-core/?wpdmdl=9288>



Extract of the mapping

NAME OF INSTITUTION*	GENERAL OBJECTIVE	SPECIFIC TO URBAN PROJECTS?	MAIN PILOT ORGANISATIONS	MAIN TYPES OF BENEFICIARIES	TOTAL AMOUNT ALLOCATED	AMOUNT ALLOCATED TO ADAPTATION	TARGET GEOGRAPHIES	SCOPE, DEFINITION OR FOCUS OF ADAPTATION	SOFT GENERAL PLANNING	SOFT PROJECT DEVELOPMENT	HARD INFRASTRUCTURES
LoCAL	ADAPTATION	Yes	UNCDF	Local authorities	USD 1,500,000	Objectives of the initiative	World	No specific definition.- Improve citizens' life conditions through protection of the environment.	X	X	
Resilient Cities Acceleration Initiative	ADAPTATION	Yes	UN	Local authorities	No information available	No information available	World	Reducing vulnerability of cities and their inhabitants to climate and disaster risks and ensuring sustainable, equitable urban development.	X		
Urban Climate Change Resilience Trust Fund*	ADAPTATION	Yes	ADB, DFID and Rockefeller foundation	Local authorities	USD 140 million available	No information available	Asia	Increase in extreme floods, sea level rises and other climate change-linked events.	X	X	X
Adaptation Fund*	ADAPTATION	No	World Bank for UNFCCC	Public institutions through Implementing Agencies	USD 277 million (as of 31/10/2014)	USD 277 million (as of 31/10/2014)	World	Support concrete adaptation activities that reduce the adverse effects of climate change facing communities, countries, and sectors.	X	X	X
Global Facility for Disaster Reduction and Recovery*	ADAPTATION	No	World Bank	Local, national, regional, and international partners	Over USD540 million in pledges and contributions since 2006	Over USD540 million in pledges and contributions since its inception in 2006	World	<ul style="list-style-type: none"> - Better understand and reduce vulnerabilities to natural hazards and adapt to climate. - 5 pillars: Risk Identification, Risk Reduction, Preparedness, Financial Protection, Resilient Recovery 	X		
Least Developed Countries Fund*	ADAPTATION	No	GEF	National government through implementing agency	USD 903,1 million as of 09/2014	No information available	World	Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change	X	X	
Pilot Program for Climate Resilience	ADAPTATION	No	World Bank	Through donors	USD 1.2 billion	USD 1.2 billion	World	Pilot and demonstrate ways in which climate risk and resilience may be integrated into core development planning and implementation by providing incentives for scaled-up action and initiating transformational change.	X	X	X
Adapt-Asia Pacific Project	ADAPTATION	No	USAID	National and local governments	No information available	No information available	Asia and Pacific	Climate change and climate variability	X	X	
ClimDev-Africa Special Fund	ADAPTATION	No	AfDB, AUC and UNECA	Regional Economic Communities National governments	USD 136 million	No information available	Africa	Contribute to sustainable development and, in particular, poverty reduction by preparing and implementing climate-resilient development programs	X		

Example of Datasheet

Datasheet number 2		
Urban Climate Change Resilience Trust Fund (UCCRF)*		
General information	Pilot Organisation	ADB, DFID, USAID and Rockefeller foundation
	Type of Initiative	<u>MULTILATERAL</u>
	Amount allocated	Total USD 140 million
Project eligibility	Type of beneficiary	<u>SPECIFIC TO LOCAL GOVERNMENTS</u>
	Geographical scope	<u>ASIA (6 selected countries)</u> : Bangladesh, India, Indonesia, Pakistan, the Philippines, and Viet Nam
Objective of the initiative	General objective(s) of the initiative	<ul style="list-style-type: none"> - Managing Climate Risks for the Urban Poor - To help secondary cities in Asia address climate change impacts. The programme aims to roll out 25 infrastructure projects and other resilience activities to protect 2.2 million poor and vulnerable populations in target cities in by 2021.
	Scope of «adaptation»	Asia is going through an unprecedented population boom and their poorest citizens are in the front line of an increase in extreme floods, sea level rises and other climate change-linked events. The projects will be designed for replication and scalability and will involve poor and vulnerable groups in planning and investment decisions. The timeframe and impacts considered for climate related changes is locally driven in each of the 7 countries in conversation with the city and national government.
	Type of activities supported	<u>BOTH</u> : Key components: (i) planning, (ii) projects/ investments, and (iii) knowledge. The programme supports comprehensive, linked approaches to urban climate proofing activities. Projects include assistance for preparing climate resilient infrastructure projects that benefit the poor and assistance for incorporating climate change and disaster risk and resilience approaches into city plans. It also supports early warning systems, regulatory reforms, research on lessons learned and best practices on urban climate change.
	Type of sectors supported	<u>TRANSVERSAL</u> : Land use and urban planning, Drainage, food and solid waste management, Water demand and conservation systems, Institutional coordination mechanisms and capacity support, Emergency management and early warning systems, Responsive health systems, Resilient housing and transport system, Ecosystems service strengthening, Diversification and protection of climate affected livelihoods, Education and capacity building of citizens
Description of the support provided	Nature of the support	<u>GRANTS AND LOANS</u>
	Additional technical support	<u>YES (Technical Assistance)</u>
	Eligibility criteria	Project proposals for the UCCRF should have clear benefits in terms of building resilience to climate change and, if appropriate, also reducing greenhouse gas emissions; adopt and demonstrate integrated urban planning principles; have clear benefits for reducing vulnerability and building the resilience of poor communities; and adopt a participatory approach. Project proposals must be in line with ADB's objectives and need to have good potential for replication, scalability, and partner cooperation. Proposals may be considered that (i) can demonstrate how resilience principles have been incorporated into the design of their program; (ii) have emerge from an integrated climate resilience planning process as a prioritized investment; (iii) complement and leverage other efforts to build resilience; and (iv) deliver improved infrastructure or services, especially for the poor and vulnerable communities.
Flagship project	Sustainable Communities in Manila Vietnam: Hue, Ha Giang, Vinh Yen, Dong Hoi, Hoi An;	
Website and other references	http://www.adb.org/documents/establishment-urban-climate-change-resilience-trust-fund-undct-ufcf	
Contact	Project proposals require an application form and draft concept paper to be submitted to ADB's Urban Financing Partnership Facility (UFPF) Manager. City based applications towards project development and pre-feasibility studies can be made directly to CDIA (see specific datasheet)	
Additional information	Projects funded under UCCRF have commenced however it is too early to identify best practice cities from this work.	

Just released...

Booklet for sub-national stakeholders heading towards the COP 21



Key concepts

on the impacts of climate change, climate policies and economic tools



in collaboration with



ClimasCOPE

#04 - July 2015

Exploring the challenges behind the Paris Agreement #COP21

A newsletter by in partnership with

PARIS2015 COP21

Heading towards the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) to be held in Paris from November 30th to December 11th 2015, CDC Climat Research, in partnership with ADEME, the French Environment and Energy Management Agency, attempts to shed some light on the challenges surrounding this Paris Climate Conference 2015. We will be exploring what can be expected from the post-2020 climate agreement in Paris. We will also be discussing some key success indicators of such an agreement. Over the course of six issues, ClimasCOPE will provide analysis related to carbon pricing, climate finance, greenhouse gas (GHG) emissions accounting, the role of sub-national actors, adaptation to climate change and the accounting of government commitments with the scenario wherein global mean temperature would rise by no more than 2°C.

Editorial - Non-state actors: pushing the climate action agenda forward

Only the 195 sovereign States and the European Union, bound by the UNFCCC, have a seat at the climate negotiations table. While it is the States that define international and national targets, their operational implementation however, is heavily dependent on GHG emissions reductions actions taken by all non-state actors, including companies, NGOs, federal States, provinces, regions, cities, etc. These actors play a proactive role in proposing initiatives and carrying out pilot projects.

Since the Copenhagen Conference in 2009 recognized for the first time the role of non-state actors through the Copenhagen Accord organized by UN Secretary General Ban Ki-moon and encouraged their involvement. Since then, these actors have reaffirmed their commitment to climate change by referring to existing and planned commitments and actions.

The Paris Agreement represents a real catalyst for their increased involvement and will be one of the positive results of the 2015 Paris Climate Change Conference. This Agenda should also encourage ambitious commitments by States, although it will not be formally included in the Paris Agreement in the strictest sense, since the Agreement will be an agreement between sovereign States.

Ensuring the required interoperability and consistency of these non-governmental ambitions as part of a long-term, global movement to reduce GHG emissions remains a challenge, which can only be tackled under four conditions:

- Ensuring the integration of these new initiatives into the long-term strategies of the States and commitments;
- Guaranteeing the credibility and effectiveness of initiatives to reduce GHG emissions, using a states monitoring, reporting and verification (MRV) system which is adapted to non-state actors, and that verifies the economic and environmental viability and public acceptance of their actions;
- Encouraging their dissemination to as many actors as possible, including through the use of public and reproducible channels of financial resources to be driven by these actors, by facilitating access routes regarding their long-term future (CFI).

With less than six months to go before this deadline, the World Summit on Climate and Territories being held in Lyon on July 1st and 2nd is a key milestone in the international mobilization of non-state actors. All regional actors are planning to make quantitative or qualitative commitments, for example in relation to transport and regional planning as well as in the forestry and agriculture sectors and by defining a credible 2°C scenario based on their actions. Whether the goals have been achieved or progress towards them is made in July, the process is well and truly under way!

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Key commitments by non-state actors taken in preparation for COP21

September 2014 - 2015 Climate Research

- Comparison of Member States' emissions reduction targets of 2015-2020
- Carbon Accounting by Local Governments
- Carbon Pricing Practices
- Commitment on Adaptation

18 November 2014 - 19-21 December 2014 Paris

- Paris Declaration
- World Summit on Climate and Territories

18 March 2015 Paris

- Cities to put a price on carbon
- Individual commitments to reduce greenhouse gas emissions from cities (C40)

19-20 May 2015 Paris

- Business & Climate Research and Climate Practice Day

4-5 June 2015 Strasbourg

- Mediterranean Climate Conference

1-2 July 2015 Lyon - Paris

- The 4th C40 Summit by non-state actors
- World Summit on Climate and Territories

7 December 2015 Paris

- COP21 (COP21)

Source: CDC Climat Research, June 2015

Useful links

- Booklet : <http://www.i4ce.org/download/sub-national-stakeholders-heading-towards-the-cop-21/>
- Climascope 4 :
<http://www.i4ce.org/download/climascope-4-on-the-mobilization-of-non-state-actors-in-the-climate-action/>
- Mapping : <http://www.i4ce.org/wp-core/?wpdmdl=9288>
- Territories & Climate program :
<http://www.i4ce.org/publication-axe/territories-climate/>

Thank you/ Merci!



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